



11.  $y(x) + \int_a^x e^{\lambda(x-t)} f(t, y(t)) dt = g(x).$

The solution of this integral equation is determined by the solution of the first-order ordinary differential equation

$$y'_x + f(x, y) - \lambda y + \lambda g(x) - g'_x(x) = 0$$

under the initial condition  $y(a) = g(a).$

### Reference

**Polyanin, A. D. and Manzhirov, A. V.,** *Handbook of Integral Equations*, CRC Press, Boca Raton, 1998.